

L Number	Hits	Search Text		Time stamp
1	82	228/\$.cccls. and non-wettable near3 solder	USPAT	2003/04/04 09:20
2	82	228/\$.cccls. and (non-wettable near3 solder)	USPAT	2003/04/04 09:31
3 ..	7	228/\$.cccls. and (non-wettable near3 solder)	USOCR	2003/04/04 09:48
4	9	"2770875"	USPAT	2003/04/04 09:47
5	1	"2770875" and wettable	USOCR	2003/04/04 09:48
6	1	"2770875" and wettable	USPAT	2003/04/04 09:48
7	33	228/\$.cccls. and (wettable near3 solder)	USOCR	2003/04/04 09:49

US-PAT-NO: 5143272

DOCUMENT-IDENTIFIER: US 5143272 A

TITLE: Desoldering device

----- KWIC -----

Referring now specifically to FIGS. 2 and 3 of the accompanying drawings, there is illustrated cartridge 2 and upper member 3 of base unit 4 of the desoldering device of the present invention. Cartridge 2 has, as indicated, tip 20 of copper, in which is embedded heater 18 of FIG. 1, comprising cylinder 32 of high mu material surrounded by coil 34. Tip 20 is bored, as at 36, and receives liner 41 in the front end region of the bore; the material of sleeve or liner 41 being fabricated from an abrasion-resistant solder wettable material to prolong the life of tip 20 and provide good thermal contact between tip 20 and solder. Tail pipe 6 is fitted into enlarged bore 40 in the back of tip 20; in communication with bore 36. The tail pipe is made of a solder non-wettable but heat conductive material such as aluminum.

US-PAT-NO: 5145104

DOCUMENT-IDENTIFIER: US 5145104 A

TITLE: Substrate soldering in a reducing atmosphere

----- KWIC -----

Because of the cleansing properties of the flux, it is not necessary to reflow the solder in a reducing gas even when gas reflow of solder is used, as described in IBM Technical Disclosure Bulletin Vol. 20, No. 2, published July, 1977 by Rivenburgh et al, which describes the use of a vacuum-vibration solder plate fixture which is made of anodized aluminum, stainless steel or graphite, materials described as being non-wettable by the solder. The fixture described restricts solder movement during reflow, functioning more in the nature of a solder mask than a positioning plate, and the use of liquid flux is also described.

228/180.

US-PAT-NO: 5762259

DOCUMENT-IDENTIFIER: US 5762259 A

TITLE: Method for forming bumps on a substrate

----- KWIC -----

FIGS. 1-10 illustrate in cross-section how a stencil is used to form conductive bumps on a substrate in accordance with one embodiment of the present invention. In a preferred embodiment of the present invention, solder is the material which forms the conductive bumps. Illustrated in FIG. 1 are portions of a first stencil 10 and a second stencil 12. Both the first and second stencil are made from a material which is non-wettable by solder, or whatever other material may be used to form the conductive bumps. Suitable stencil materials which can be used to form solder bumps include molybdenum, some stainless steels, and glass. Alternatively, other materials can be used for stencils which include an external oxide layer to provide the non-wettable surface. An opening 14 is formed in first stencil 10, while a recess 16 is

formed on the under bump metallurgy layer 36. This solder dam may include a layer of a solder non-wettable material, such as titanium or chromium, on the under bump metallurgy layer 36. The solder dam can be used to contain the solder if a reflow step is performed prior to removing the first (exposed) portion of the under bump metallurgy layer 36 not covered by solder, as discussed below. The patterned mask layer 40 thus exposes a portion of the solder dam which can be removed thereby uncovering the second portion of under bump metallurgy layer 36 on which solder is plated.

228/180.22

228/232

228/25